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**Patent- og Varemærkestyrelsen**  
Økonomi- og Erhvervsministeriet

04 February 2005

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Modtaget

## Underpants

This invention relates to a pair of underpants comprising a front part, a back part, a crotch part and two leg holes, and releasable connecting means for  
5 connecting the crotch part to the front part, said releasable connecting means extending from one leg hole to the other and allowing an opening to be formed in the crotch area.

The purpose of an opening in the crotch area is for the wearer to be able to  
10 go to the toilet without having to take the underwear off. This applies for example for a body stocking. As such a garment covers the whole torso it is very troublesome to remove the whole garment when going to the bathroom.

An opening in the crotch part is especially desirable for patients with a stoma  
15 in case where the ostomy collection bag is placed on the outside of the underwear.

Underwear with a releasable connecting means in the crotch area is well known. These releasable connecting means are usually Velcro-bands,  
20 buttons and corresponding buttonholes, hooks and eyes, etc. These structures are often placed on a band, often made of a polymer material, and when the band is cut to fit in the underpants the edges are rough and can cause discomfort and irritation in the groin area.

25 It is an object of the invention to prevent irritation and discomfort originating from rough edges on releasable connecting means on underpants with an opening thus making the underwear more comfortable for the wearer.

It is a further object of the invention to make it easier for the wearer to open  
30 an opening on a pair of underpants.

Summary of the invention

5 The pair of underpants according to the invention comprises a front part, a back part, a crotch part and two leg holes, and releasable connecting means for connecting the crotch part to the front part and allowing an opening to be formed in the crotch area, said releasable connecting means extending from one leg hole to the other and comprising two parts one overlapping the other in the closed condition characterized in that the ends of the outer overlapping  
10 part of said releasable connecting means are provided with flexible protection means.

The invention is based on the discovery that by folding the protection means provided on the ends of one part of the releasable connecting means around  
15 the ends of the releasable connecting means of the other part, the discomfort caused by said ends is minimized thereby making the underpants more comfortable.

In a preferred embodiment the protection means are in the form of ribbons,  
20 made from a soft material. Each ribbon preferably has a sufficient width to cover the edge to be protected.

The ribbons are preferably placed on the outer overlapping part of the releasable connecting means but may also be provided on the inner part of  
25 the releasable connecting means.

The ribbons can be made of cotton, nylon or any other material suitable for straps or tapes being relatively unstretchable and having a soft feel.

The length of the ribbons can vary from 15 to 120 mm, preferably being of a length sufficient to keep the ribbons in place when tucked between the underpants and the body of the wearer.

- 5 In a further preferred embodiment of the invention the ribbon is in the form of a loop, making it easier for persons with poor dexterity to disengage the interconnected releasable connecting means. The loop is preferably of a length of 95 to about 160 mm enabling the loop to hold diameters from around 30 mm to around 50 mm, a size large enough for a person to be able  
10 to place one or two fingers in the loop and thereby use it to pull the connecting means apart.

#### Brief description of the drawings

- 15 Figure 1 illustrates a front view of a preferred embodiment of a pair of underpants according to the invention.

Figure 2 illustrates a front view of another preferred embodiment of a pair of underpants according to the invention.

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Figure 3 illustrates a front view of a further preferred embodiment of a pair of underpants according to the invention

- Figure 4 illustrates a front view of yet another preferred embodiment of a pair  
25 of underpants in open condition according to the invention.

#### Detailed description

- Figure 1 illustrates a pair of underpants with a front part 1, a crotch part 2,  
30 two leg holes 3, releasable connecting means 4 one overlapping the other

and two flexible protection means 5 attached to the ends 6 of the releasable connecting means 4 in the leg holes 3 of the underpants.

5 In figures 2 and 3 the various parts of the pair of underpants are designated with the same reference numbers as in figure 1.

Figure 2 two flexible protection means 11 which are in the form of a loop. The hole 12 in the loop is large enough to be able to place a finger in it.

10 Figure 3 illustrates two flexible protection means 21 which are folded through the leg holes 3 to the inside of the underpants. When the underpants are in use the flexible protection means 21 are placed between the underpants and the body of the user where the pressure between these two keep the flexible protection means 21 in place.

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Figure 4 illustrates a pair of underpants in an open condition, i.e. where the releasable connecting means 30, 31 are disengaged. A first releasable connecting means 31 is placed on the crotch part 34 of the underpants and a corresponding releasable connecting means 30 is placed on the front part 32 of the underpants. A flexible protection means 33 in the form of a loop is attached to the underwear around the ends of the releasable connecting means 30, 31.

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## Claims

1. A pair of underpants comprising a front part (1), a back part, a crotch part (2) and two leg holes (3), and releasable connecting means (4, 20, 30, 31) for  
5 connecting the crotch part (2) to the front part (1) and allowing an opening to be formed in the crotch area, said releasable connecting means (4, 20, 30, 31) extending from one leg hole (3) to the other and comprising two parts one overlapping the other in the closed condition characterized in that the ends (6) of the outer overlapping part of said releasable connecting means (4, 20,  
10 30, 31) are provided with protecting flexible protection means (5, 11, 21, 33).
2. A pair of underpants according to claim 1 wherein the flexible protection means (5, 11, 21, 33) are placed on the outer overlapping part of the releasable connecting means (4, 20, 30, 31).  
15
3. A pair of underpants according to claim 1 or 2 wherein the flexible protection means (5, 11, 21, 33) are made of cotton, nylon or any other material suitable for straps or tapes being relatively unstretchable and having a soft feel.  
20
4. A pair of underpants according to claim 1 to 3 wherein the flexible protection means (5, 11, 21, 33) are in the form of ribbons.
5. A pair of underpants according to claim 4 wherein the ribbons have a  
25 length of about 15 to about 120 mm.
6. A pair of underpants according to claims 1 to 3 wherein the flexible protection means (5, 11, 21, 33) are in the form of loops (12).

7. A pair of underpants according to claim 6 wherein the loops have a length of about 95 to about 160 mm enabling the loop to hold diameters from about 30 to about 50 mm.
- 5 8. A pair of underpants according to claims 1 or 7 wherein the flexible protection means (5, 11, 21, 33) have a width sufficient to cover the whole edge (6) of the releasable connecting means (4, 20, 30, 31) to be covered.



## **Abstract**

5 A pair of underpants comprising a front part, a back part, a crotch part and two leg holes, and releasable connecting means for connecting the crotch part to the front part and allowing an opening to be formed in the crotch area, said releasable connecting means extending from one leg hole to the other and comprising two parts one overlapping the other in the closed condition wherein the ends of the outer overlapping part of said releasable connecting means are provided with protecting flexible protection means.

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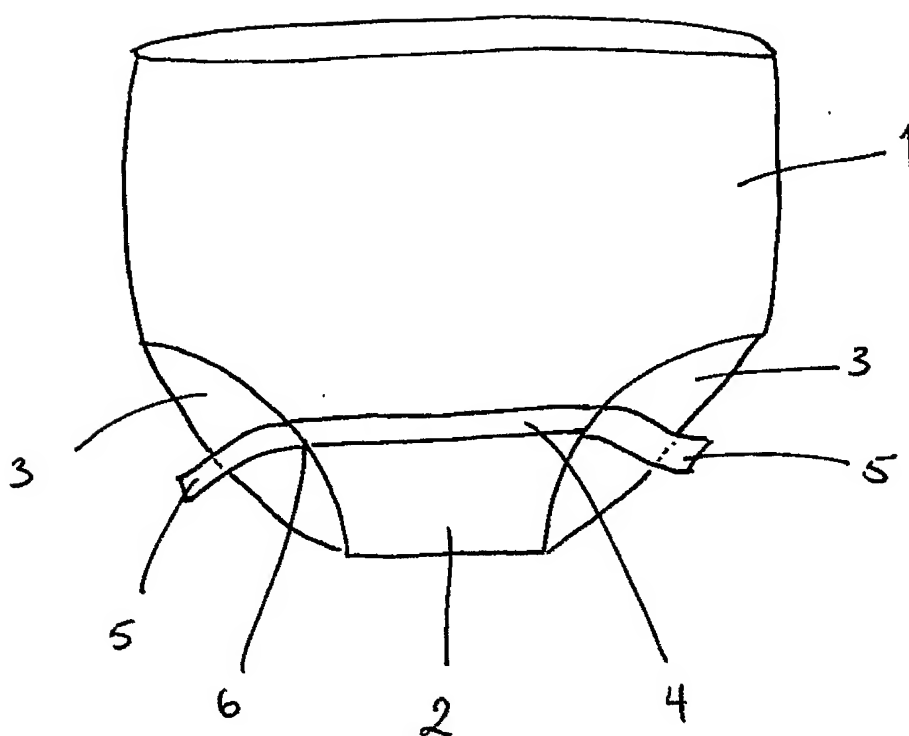


Figure 1

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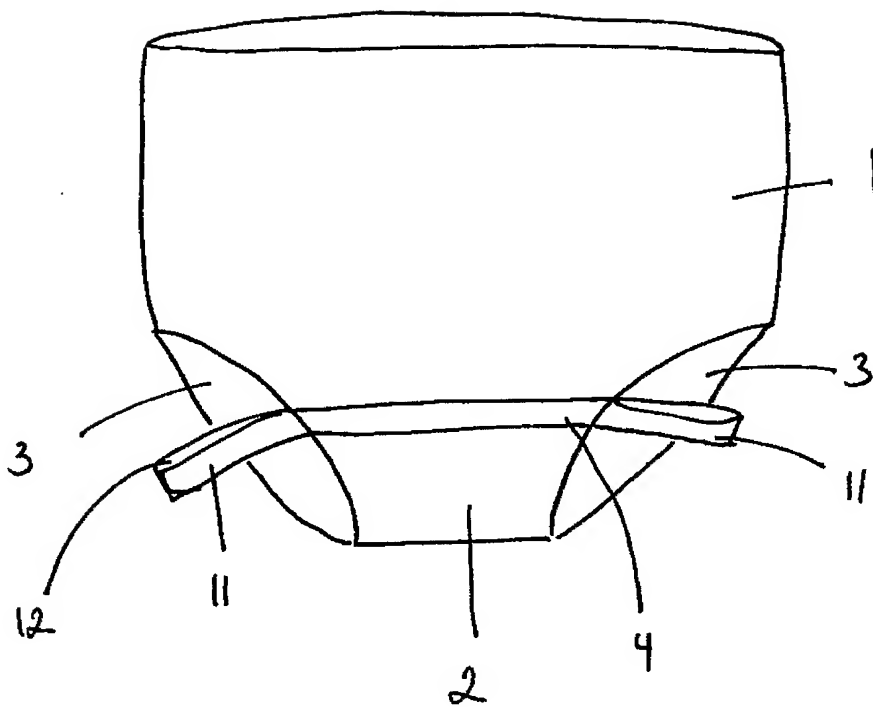


Figure 2

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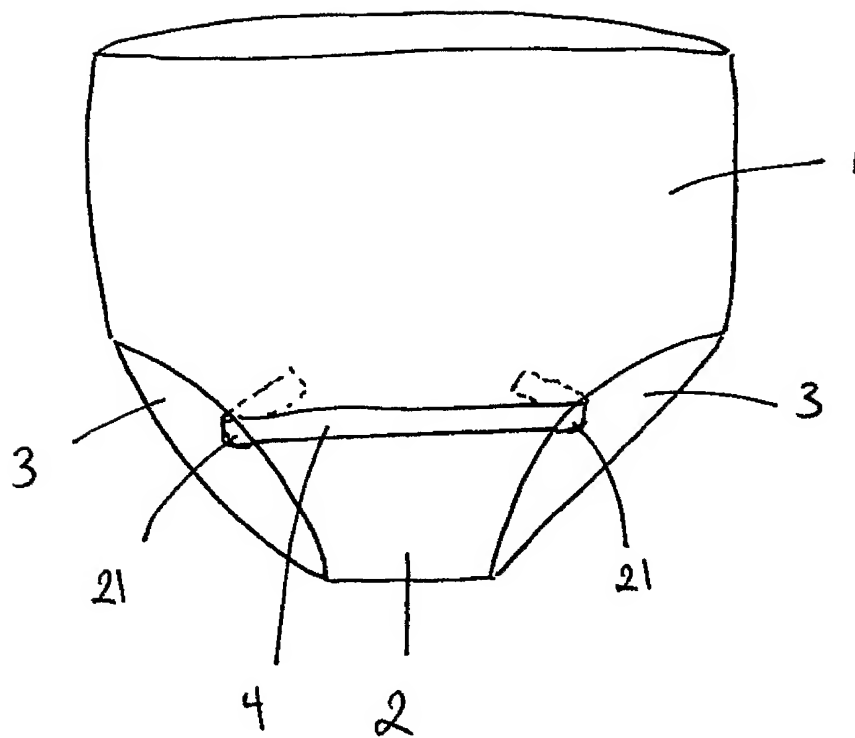


Figure 3

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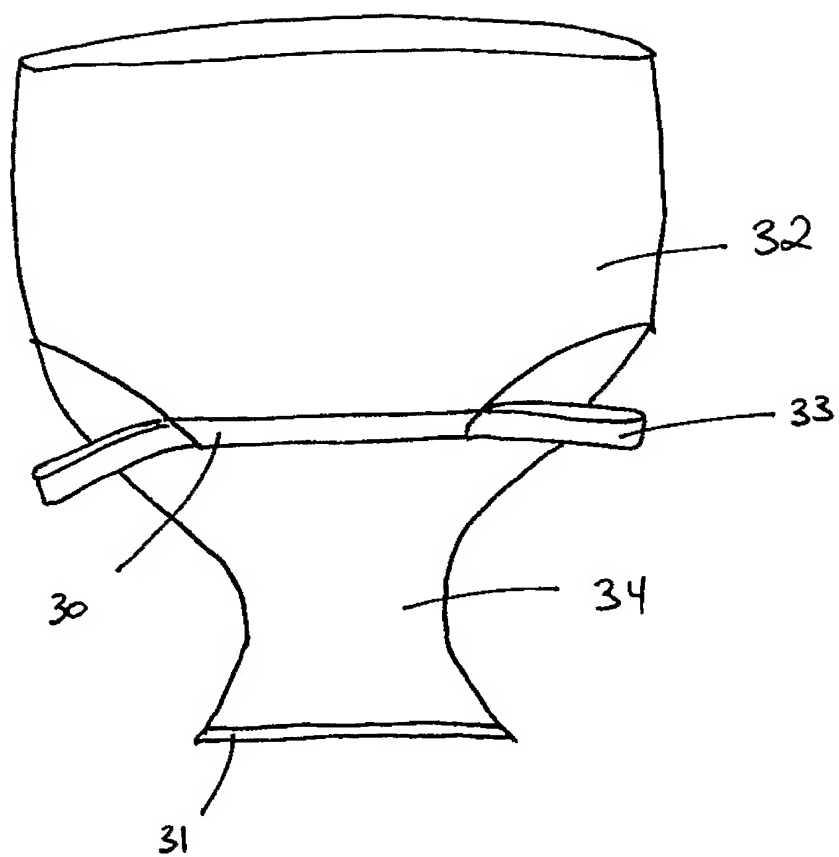


Figure 4